Claims

1. (Currently Amended) Method for machining running surfaces of a railroad wheel set, ~~characterized in that~~

wherein

- the wheel set with both wheel disks is placed on several supporting and drive rollers of a movable wheel set machine,
- the wheel set axle is received and centered between back centers of two supported tailstocks,
- the position of the wheel set relative to the center of the machine is ascertained,
- depending on the result of the ascertainment, a tool is first is adjusted first in Z direction of the machine to machine the running surface of at least one of the two wheel disks of the wheel set,
- the wheel set is imparted rotation by at least one of the supporting and drive rollers,
- the back of the running surface is then planed by means of the tool,
- the planed back of the running surface is supported in Z direction and
- the supported running surface is profiled by means of a tool.

2. (Currently Amended) Method to machine running surfaces of a railroad wheel set, ~~characterized in that~~

wherein

- the wheel set axle is received and centered between back centers of two supported tailstocks of a movable wheel set machining machine,
- the position of the wheel set relative to the center of the machine is ascertained,
- depending on the result of the ascertainment, a tool for the machining of the running surface of at least one of the two wheel disks of the wheel set is first adjusted in Z direction of the machine,
- a drive roller is applied to the running surface of at least one of the two wheel disks of the wheel set and rotation is thereby imparted to the wheel set,
- the back of the running surface is then planed by means of the tool,
- the planed back of the running surface is supported in Z direction and
- the supported running surface is profiled by means of a tool.

3. (Currently Amended) Method as in claim 1 ~~or 2~~, ~~characterized in that~~ wherein

the running surfaces are planed and/or profiled by turning, milling or grinding.

4. (Currently Amended) Method as in claim ~~one of the claims~~ 1 ~~to 3~~, ~~characterized in that~~ wherein

the position of the wheel set relative to the center of the machine is ascertained by tracing a shoulder or relief of the wheel set axle by means of a tracer.

5. (Currently Amended) Method as in claim ~~one of the claims~~ 1 ~~to 4~~,

~~characterized in that~~

wherein

the backs of each of the running surfaces of the two wheel disks of the wheel set are planed by means of a tool.

6. (Currently Amended) Method as in claim 5, ~~characterized in that~~

wherein

the AR distance between the two backs of the running surfaces is adjusted.

7. (Currently Amended) Method as in claim ~~one of the claims~~ 1 ~~or 2~~,

~~characterized in that~~

wherein

the planed back of the running surfaces is supported in Z direction by means of a roller.

8. (Currently Amended) Method as in claim ~~one of the claims~~ 1 ~~to 3~~,

~~characterized in that~~

wherein

brake disks that may also be present on the wheel set are machined by means of a tool.

9. (Currently Amended) Method as in claim 8, ~~characterized in that~~ wherein

the same tool is used to machine brake disks as to machine running surfaces.

10. (Currently Amended) Machine tool for the machining of running surfaces and/or brake disks of railroad wheel sets by chip-removing machining, ~~characterized by~~ wherein

- a movable machine frame ~~(5)~~,
- two back centers ~~(8)~~ each of which is supported in a tailstock ~~(9)~~ so as to bew capable of longitudinal displacement and rotation and at a distance from each other in Z direction of the machine frame ~~(5)~~ equal to the length of the wheel set ~~(7)~~ length and aligned with each other,
- a common support of the two tailstocks ~~(9)~~
- at least one supporting and/or drive roller ~~(4)~~ that can be brought to bear against the running surface ~~(1)~~ of at least one of the two wheel disks ~~(3)~~ of the wheel set (2) which can be brought into contact with.
- at least one apparatus to ascertain the position of a wheel set ~~(2)~~ in Z direction relative to the center ~~(10)~~ of the machine frame ~~(5)~~,
- at least one tool carriage ~~(19)~~ with
- at least one tool ~~(11, 14)~~
- one advance feed to move the tool carriage ~~(19)~~ at least in directions X and Z and
- one support of the running surfaces in Z direction.

11. (Currently Amended) Machine tool as in claim 10, ~~characterized in that~~ wherein

the common support of the two tailstocks ~~(9)~~ consist of a yoke ~~(20)~~ for each tailstock ~~(9)~~ and two draw bars ~~(21)~~ connecting the two yokes ~~(20)~~ with each other.

12. (Currently Amended) Machine tool as in claim 10, ~~characterized in that~~ wherein

two supporting and drive rollers ~~(4)~~ are provided for each wheel disk ~~(3)~~ of the wheel set ~~(2)~~.

13. (Currently Amended) Machine tool as in claim 12, ~~characterized in that~~ wherein

the two supporting and drive rollers ~~(4)~~ are at a distance from each other and are located nearly vertically below the wheel set ~~(2)~~ held between the back centers ~~(8)~~.

14. (Currently Amended) Machine tool as in claim 13, ~~characterized in that~~ wherein

the two supporting and drive rollers ~~(4)~~ can be adjusted and fixed in X direction.

15. (Currently Amended) Machine tool as in claim 10, ~~characterized in that~~ wherein

a tracer ~~(16)~~ movable at least in Z and X directions is provided.

16. (Currently Amended) Machine tool as in claim 10, ~~characterized in that~~ wherein

the tool support ~~(19)~~ is movable in X, Y and Z directions.

17. (Currently Amended) Machine tool as in claim ~~claims~~ 15 ~~and 16~~, ~~characterized in that~~ wherein

the tool carriage ~~(19)~~ is provided with a tool receptacle ~~(22)~~ to receive a machining tool ~~(11, 14)~~ or a tracer ~~(16)~~

18. (Currently Amended) Machine tool as in claim 10, ~~characterized in that~~ wherein

at least one rotatably mounted supporting roller ~~(17)~~ is provided and is longitudinally movable in Z direction.